

SOME UNUSUAL AND INTERESTING BUTTERFLIES
FROM EASTERN MASSACHUSETTS.

BY AUSTIN H. CLARK.

Smithsonian Institution, Washington, D. C.

During the months of July and August in 1923, 1924 and 1925 such time as could be spared from my regular duties was occupied in a study of the butterflies in eastern Massachusetts. The territory covered in 1923 extended from Needham to Waltham, Weston and Lincoln with headquarters at Newtonville. In 1924 and 1925 the region studied was from Manchester to Ipswich, especially Essex, with headquarters at Manchester.

On all of my excursions I was accompanied by my two sons, Austin B. J. Clark and Hugh U. Clark who are responsible for most of the captures recorded below.

In 1923 our efforts were mainly directed toward determining the status of *Feniseca tarquinius* in the region covered. We found it to be common, generally distributed, and readily secured in quantities after one has learned to recognize its characteristic haunts.

In 1924 and 1925 we concentrated our attention mainly on three localities in Essex which are natural butterfly traps. The first was an enormous patch of milkweed (*Asclepias syriaca*) by the roadside on Conomo street nearly opposite the farm house on Mr. S. D. Warren's estate. The next was a bog of considerable size wholly surrounded by wooded hills off the same street half a mile or so further on. Here numerous scattered examples of the red milkweed (*Asclepias incarnatum*) and later an abundant growth of *Cephalanthus* and subsequently patches of Joe Pye weed (*Eupatorium purpureum*) served as bait for the multitudes of argynnids and other butterflies that filtered in through the woods. The third was a dry hillside on the north side of Apple street near Bixby's camps sloping downward toward the west to a marshy spot protected from the wind by a fairly steep hill just beyond.

The summer of 1923 in eastern Massachusetts was noteworthy for the great abundance of *Satyrodes canthus* which in

early July swarmed in all wet grassy places more or less protected by woodlands, and for the abundance of *Feniseca tarquinius* in correlation with the unusual abundance of its host (*Schizoneura tessellata*.)

The summer of 1924 was marked by the appearance of *Vanessa cardui* in great abundance and an increase in the numbers of *V. virginiensis*, together with an abrupt decrease in the numbers of nearly every other butterfly except *Anosia plexippus*, especially those types like *Argynnis*, *Brenthis*, *Satyrodes*, *Epidemia* and *Feniseca* which live in moist localities.

In 1925 *Vanessa cardui* was absent and *V. virginiensis* very scarce. In early July *Papilio glaucus* was unusually abundant, so numerous indeed that I counted more than twenty at one time about a single patch of milkweed in Essex. All the fritillaries were unusually abundant except *Speyeria idalia*, which was scarcely so numerous as in the preceding year, though still quite common. Hair-streaks and blues, as in 1923, were very common. A curious feature of the year was the great scarcity of *Anosia plexippus* which had been abundant in the two years preceding; not over half a dozen were seen in the course of the whole summer, and no larvæ were found.

***Argynnis atlantis* Edwards.**

Essex: Bog off Conomo street, August 24, 1924, one female (A. H. C.); July 12, 1925, one female (A. B. J. C.); July 22, 1925, one male (A. H. C.); August 9, 1925, one female (A. H. C.). Milkweed patch on Conomo street, July 9, 1925, one reported (A. B. J. C.); July 10, 1925, remains of a female found on the ground (A. H. C.); August 9, 1925, one male (A. H. C.).

Apparently this butterfly is resident in this region. All the specimens seen were caught, though one was subsequently lost. It is easily distinguished from *A. cybele* and *A. aphrodite* both when on the wing and when resting. The preponderance of females among the captures was undoubtedly due to the lateness of the season.

***Junonia coenia* Hübner.**

Essex: Marshy spot at the base of a dry hillside near Bixby's camps, Apple street, August 29, 1925, one (A. H. C.). Salt marsh at the junction of Apple street and the road to Essex Centre, August 30, 1925, one seen but not caught.

When resting this butterfly is very conspicuous but on the wing it is difficult to follow and is easily mistaken for a dragon-fly or grasshopper. It probably is a not uncommon casual in the extensive salt marshes and among the sand dunes of Essex county. In July 1898 I found it in numbers at Coffin's beach where apparently it had survived the winter.

***Basilarchia arthemis* (Drury).**

Newtonville: Hillside west of Lowell avenue and south of Otis street, July 28, 1923, after a strong northerly gale, one (H. U. C.). This northern form is strikingly different from the usual, though not common, "white admiral" of this region.

***Feniseca tarquinius* (Grote).**

Manchester: Tennis courts, Essex County club, July 21, 1925, one (A. H. C.). Alders along road over outlet of Gravel Pond, August 1925, larvæ (A. B. J. C.; H. U. C.).

Essex: Bog off Conomo street, August 30, 1925, one (A. B. J. C.). Main road from Manchester to Essex just beyond the Manchester line, fifteen larvæ, August 28, 1924; adult and eleven larvæ, September 1, 1925. Conomo road, on alders by a stream, August 1925, larvæ.

Newton Centre: Alders near stream east of Walnut street near Newtonville, August 1923, a few larvæ.

Newtonville: Woods south of Cabot street, two localities, abundant in both in 1923, apparently absent in 1924, a few in 1925. Hillside west of Lowell avenue and south of Otis street, abundant in 1923, absent in 1924 and 1925.

West Newton: Braeburn Club, near Pond, 1923.

Weston: west of the road to Lincoln, about alders, two localities, abundant in all stages, 1923.

Near the Lowell avenue locality in Newtonville larvæ were found on the carrion flower (*Smilax herbacea*) feeding on the large woolly aphid (*Neoprociphilus attenuatus*) that infests that plant. All of these larvæ were light pink in color and unmarked, but the butterflies reared from them were indistinguishable from those reared from larvæ found feeding on the woolly aphid of the alder (*Schizoneura tessellata*).

Two pupal skins from which the butterflies had emerged were found. One of these, at the Lowell avenue locality in Newtonville, was about four feet up on the main trunk of a large alder which had no aphids on its branches; the trunk was about three inches in diameter. The head of the pupa was directed downward. The other, from the locality in Essex near the Manchester line, was on the upper side of an alder leaf about a foot from the ground and directly beneath a large colony of aphids about six feet above it. The leaf was smeared with the exudations from the aphids to which cast skins and "wool" adhered. The pupa was in the inner half of the leaf and was attached to one of the veins near the midrib; its axis was parallel to the vein and its head was directed outward toward the margin of the leaf. In both these cases the larvæ had evidently dropped to the ground and thence crawled up to the supports on which they were found.

This is the easiest to rear of any of our butterflies, but reared adults are so very much more variable than those caught wild as to be practically useless for comparative purposes. Reared specimens in collections should be always labeled as such.

Chrysophanus thoë Boisduval

Essex: Marshy spot at the base of a dry hillside near Bixby's camps, Apple street, September 1, 1925, one female (A. B. J. C.).

Epidemia epixanthe (Boisduval and Le Conte)

Essex: Bog off Conomo street, common in a very small area in the southeastern portion, but scarcely ever seen beyond this area.

This species is common in all suitable localities in Waltham, Weston and Lincoln, but it is so inconspicuous that it frequently escapes observation.

Iphidicles ajax (Linné).

Brighton: one much broken specimen, June 1898 (Charles M. Bowers).

Laërtias philenor (Linné).

Manchester: Blossom Lane, August 17, 1925, one female (A. H. C.). This is not a common insect in this part of Essex county, though it appears from time to time.

Eurymus eurytheme (Boisduval).

Ipswich: About a mile east of the lighthouse, August 25, 1925, five seen, three males caught (A. B. J. C., 2; A. H. C., 1). All of these were fresh, though somewhat broken; apparently they had not come from any great distance.

Essex: Dry hillside near Bixby's camps, Apple street, August 30, 1925, one male.

Eurymus philodice (Godard).

Essex: Dry hillside near Bixby's camps, Apple street, August 30, 1925, one very pale, almost white, male (H. U. C.).